

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph at page 1 [0001] with the following amended paragraph.

[0001] The present invention relates to sharing computer objects between computer spaces and, in particular, to utilizing associations that computer objects have between each other in the sharing of computer ~~the~~ objects.

Please replace the paragraph at page 3 [0009] with the following amended paragraph.

[0009] The present invention utilizes the associations that objects have in the sharing of the objects between computer spaces. These associations can prevent or defer object shares if the extent of association in a new computer space is too weak. Also, by automatically carrying or sharing them when an object is shared, the associations of the objects are available in each computer ~~space-~~ space where the object resides.

Please replace the paragraph at page 6 [0027] with the following amended paragraph.

[0027] Table 1A lists exemplary information that may be obtained by the system activity monitor 104 and stored in the computer system database 106. With regard to the various computer files and computer information (referred to collectively as objects) a computer user might interact with, the system activity monitor 104 may collect data relating to any or all of, the creator/author of the object, the type of the object, any pointer to the object (if available), activation events, object size etc. For example, system activity monitor 104 may obtain the information about the objects with which a computer user interacts, determine whether the objects are new or unique relative to other objects listed in the computer system database 106 (e.g., based upon a unique object identifier), and aggregate or store the activities in computer system database 106 in association with the unique object identifier of the object.

Please make the following amendments in the headings within the first two rows of Table 1B on page 9:

Please replace “C nstructs” with “Constructs”, “Op rati nalizati n” with “Operationalization”, “Data C llecting” with “Data Collecting”, and “Data Pr c ssing” with “Data Processing”.

Please replace the paragraph at page 10 [0032] with the following amended paragraph.

[0032] Relationship processing system 108 may further include a chunking system 112, that uses the degrees of similarity or association determined by similarity or association system 110 for an arbitrarily large set of objects or files, and groups or “chunks” them into a specified number of sub-groups. For instance, given 100 photos, chunking system 112 could separate them into any number of sub-groups or chunks based on one or more criteria, such as the dates they were taken, or who is in the photos, for example. The criteria to be used by chunking system 112 may be pre-defined or specified by a user, for example, ~~and in~~ one implementation can place the same item into several chunks (e.g., a picture of Bob and Sue would go into a Bob chunk as well as a Sue chunk). Chunking system 112 may be implemented as one or more programs stored on the computer.

Please replace the paragraph at page 11 [0033] with the following amended paragraph.

[0033] A context association user interface system 116 utilizes information stored in computer system database 106 by system activity monitor 104, as well as information determined by similarity or association system 110 and chunking system 112 to display visualizations 118 illustrating context associations between computer system files, computer information, and other information. Visualizations 118 may be based upon the results of database queries 120 to which, in some instances, data filters 122 are applied. In addition, user interface system 116 can provide application and system notifications 124[[3]], as described below in greater detail.

Please replace the paragraph at page 13 [0038] with the following amended paragraph.

[0038] In one implementation users are notified that the data is collected and what it is used for. Users are provided one or more controls to selectively enable or disable the data collection, or explicitly adjust the importance of objects and their association weights, as

described below. In other implementations, the ways in which the data is collected may be modified automatically based on how the data is used. While data is typically collected at the level of an individual user and computer, it will be appreciated that the data from multiple users and their computers could be combined. For such a shared data implementation, system 100 will provide unique identifiers for the data, objects and sessions, consistent handling of to[[-]] and from[[-]] fields for communications, replication of event identifiers across computers in shared sessions, privacy, and so forth.

Please replace the paragraph at page 14 [0044] with the following amended paragraph.

[0044] As indicated by their directional indicators, hard associations 162A-162D may be characterized as being unidirectional in that the association is valid only in one direction. One characterization of such hard associations is that “object 1 has full knowledge of object 2.”

Examples of hard associations are:

- A MessageTo ~~MessageTo~~ association between a person who received an email and an email message object or a document object attached to the email.
- An [[']]email attachment from a person [[']], association between a person1 and a document1 where document1 has been attached by person1 in an email message received by person2, who published this document on a computer network. This association could be called “message attachment association (obj1 is email message containing attachment obj2),” and together with a “MessageFrom” association can create a second-order association.
- A Container association between an object 1 and object 2 indication that object 2 is contained within object 1.
- A Derived association between an object 1 and object 2 indication that object 2 was derived from object 2

It will be appreciated that these examples of hard associations are illustrative and that other hard associations may be included in a computer system employing association sharing method 150, or may be added or defined by users.

Please replace the paragraph at page 20 [0063] with the following amended paragraph.

[0063] Association table 302, sometimes referred to as Assocs table ~~300-302~~, has type-independent entries that support linking of objects of different types. As a result, association table 302 includes a unique association identifier (id) field 310 that identifies an association or relationship between a pair of objects (e.g., document, person, web site, etc.). Each object is represented in an object table 304 by a unique identifier that is stored in an identifier field 308 (id) in an object table 304.

In the heading of Table 3 on page 25, please replace the word “Ass ciation” with “Association”.

In the heading of Table 3 on page 26, please make the following amendments: Please replace the word “Ass ciation” with “Association” and “Tabl “ with “Table”.

AMENDMENTS TO THE TITLE

Please replace the title at page 1 with the following amended title.

ASSOCIATING COMPUTER OBJECTS AND SHARING OBJECTS ALONG WITH THEIR
ASSOCIATIONS.